

## PATENT COOPERATION TREATY

PCT/EP2003/00988

From the INTERNATIONAL BUREAU

## PCT

NOTIFICATION OF TRANSMITTAL  
OF COPIES OF TRANSLATION  
OF THE INTERNATIONAL PRELIMINARY  
EXAMINATION REPORT  
(PCT Rule 72.2)

To:

KARLHUBER, Mathias  
COHAUSZ & FLO  
Bleichstrasse 14  
40211 Düsseldorf  
ALLEMAGNE

Eingang:	25. APR. 2005
Postfach:	
Beurteilt:	27
Erteilt:	1
Gegeben:	

Date of mailing (day/month/year) 21 April 2005 (21.04.2005)	
Applicant's or agent's file reference KA/nw 010913WO	IMPORTANT NOTIFICATION
International application No. PCT/EP2003/009888	International filing date (day/month/year) 05 September 2003 (05.09.2003)
Applicant BOMBARDIER TRANSPORTATION GMBH et al	

## 1. Transmittal of the translation to the applicant.

The International Bureau transmits herewith a copy of the English translation made by the International Bureau of the international preliminary examination report established by the International Preliminary Examining Authority.

## 2. Transmittal of the copy of the translation to the elected Offices.

The International Bureau notifies the applicant that copies of that translation have been transmitted to the following elected Offices requiring such translation:

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## 3. Reminder regarding translation into (one of) the official language(s) of the elected Office(s).

The applicant is reminded that, where a translation of the international application must be furnished to an elected Office, that translation must contain a translation of any annexes to the international preliminary examination report.

It is the applicant's responsibility to prepare and furnish such translation directly to each elected Office concerned (Rule 74.1). See Volume II of the PCT Applicant's Guide for further details.

The International Bureau of WIPO 34, chemin des Colombettes 1211 Geneva 20, Switzerland	Authorized officer Yolaine Cussac
Facsimile No. +41 22 740 14 35	Facsimile No. +41 22 338 70 80

Form PCT/IB/338 (July 1996)

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Translation

PATENT COOPERATION TREATY

PCT/EP2003/009888



PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

Applicant's or agent's file reference KA/nw 010913WO	<b>FOR FURTHER ACTION</b> See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/EP2003/009888	International filing date (day/month/year) 05 September 2003 (05.09.2003)	Priority date (day/month/year) 05 September 2002 (05.09.2002)
International Patent Classification (IPC) or national classification and IPC B61F 5/22		
Applicant BOMBARDIER TRANSPORTATION GMBH		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of <u>6</u> sheets, including this cover sheet.  <input type="checkbox"/> This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).  These annexes consist of a total of <u>        </u> sheets.
3. This report contains indications relating to the following items:  I <input checked="" type="checkbox"/> Basis of the report II <input type="checkbox"/> Priority III <input type="checkbox"/> Non-establishment of opinion with regard to novelty, inventive step and industrial applicability IV <input type="checkbox"/> Lack of unity of invention V <input checked="" type="checkbox"/> Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement VI <input type="checkbox"/> Certain documents cited VII <input type="checkbox"/> Certain defects in the international application VIII <input type="checkbox"/> Certain observations on the international application

Date of submission of the demand 02 April 2004 (02.04.2004)	Date of completion of this report 25 January 2005 (25.01.2005)
Name and mailing address of the IPEA/EP	Authorized officer
Facsimile No.	Telephone No.

Form PCT/IPEA/409 (cover sheet) (July 1998)

# INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.

PCT/EP2003/009888

## I. Basis of the report

### 1. With regard to the elements of the international application:\*

- ☒ the international application as originally filed
- ☒ the description:  
 pages \_\_\_\_\_ 1-4 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the claims:  
 pages \_\_\_\_\_ 1-6 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, as amended (together with any statement under Article 19  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☒ the drawings:  
 pages \_\_\_\_\_ 1/1 \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_
- ☐ the sequence listing part of the description:  
 pages \_\_\_\_\_, as originally filed  
 pages \_\_\_\_\_, filed with the demand  
 pages \_\_\_\_\_, filed with the letter of \_\_\_\_\_

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.  
 These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:
- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:
- ☐ contained in the international application in written form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☐ The amendments have resulted in the cancellation of:

- ☐ the description, pages \_\_\_\_\_
- ☐ the claims, Nos. \_\_\_\_\_
- ☐ the drawings, sheets/fig \_\_\_\_\_

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).\*\*

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rule 70.16 and 70.17).

\*\* Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

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## V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)	Claims	1-6	YES
	Claims		NO
Inventive step (IS)	Claims	1-6	YES
	Claims		NO
Industrial applicability (IA)	Claims	1-6	YES
	Claims		NO

### 2. Citations and explanations

#### 1. Reference is made to the following document:

D1: FR-A-2 092 207.

#### 2. Document D1 (see the embodiment as per figure 2) is considered to be the closest prior art for the subject matter of the application. D1 discloses (the references in parentheses are to D1):

running gear for rail vehicles, more particularly for passenger traffic, in which:

- a running gear frame (13, 15) is supported on wheels or wheel sets by means of primary springs and supports a vehicle body (1);
- the vehicle body (1) is supported, in relation to the running gear frame (13, 15), on at least one spring carrier (7) by means of secondary springs (5);
- the spring carrier (7) is suspended on the running gear frame (13, 15) by means of pendulums (11);
- the fastening points of the pendulums (11) are inwardly offset on the running gear frame, in

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contrast to vertical pendulums (11), in such a way that the longitudinal axes of the pendulums (11) extend obliquely; and

- an active actuator is disposed horizontally between the running gear frame and the spring carrier (7) in such a way that the active actuator sets the tilt to an optimal value.

The subject matter of claim 1 differs therefore from that known running gear in that:

- the vehicle body is connected to the running gear frame by means of shock absorbers which dampen vertical or wobbling movements, and in that
- the action of the centrifugal force is supported by the active actuator.

The subject matter of claim 1 is therefore novel (PCT Article 33(2)).

3. The problem addressed by the present invention is that of devising running gear for rail vehicles which, when the vehicle is travelling round a bend, allows the vehicle body to tilt towards the inside of the bend in order to reduce the transverse acceleration and thereby improve passenger comfort. In particular, the advantage of the invention is that the vehicle body is tilted predominantly by the centrifugal force, and therefore only small additional control forces are required for optimal setting of the tilt.

- 4.1 It would appear from the description on page 2 (fourth paragraph) that the following feature is essential to the definition of the invention:

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- (a) the vehicle body is tilted predominantly by the centrifugal force, and therefore only small additional control forces are required to set the tilt at the optimal value.

Since independent claim 1 does not contain this feature, it does not meet the requirement of PCT Article 6 in conjunction with PCT Rule 6.3(b) that each independent claim must include all the technical features essential to the definition of the invention.

- 4.2 The combination of features formed by the subject matter of claim 1 and feature (a) is neither known from, nor suggested by, the available prior art. It is therefore proposed that a new independent claim that includes this feature be formulated.

The solution of the proposed new claim 1 involves an inventive step (PCT Article 33(3)) for the following reasons: the tilting system is essentially passive, which results in optimal (i.e., without delay) setting of the tilt and the active actuator merely improves the tilt.

5. Dependent claims 2 to 6 are dependent on claim 1 and therefore likewise meet the PCT requirements for novelty and inventive step.

**Certain defects in the international application**

6. Claim [1] has not been drafted in the two-part form defined by PCT Rule 6.3(b). However, in the present case the two-part form would appear to be appropriate. Accordingly, the features known in combination from the prior art (see item 2. and document D1) should have been placed in the preamble (PCT Rule 6.3(b)(i)) and the remaining features

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specified in the characterizing part (PCT Rule  
6.3(b)(ii)).

7. Contrary to PCT Rule 5.1(a)(ii), the description does  
not cite document D1 or indicate the relevant prior  
art disclosed therein.

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